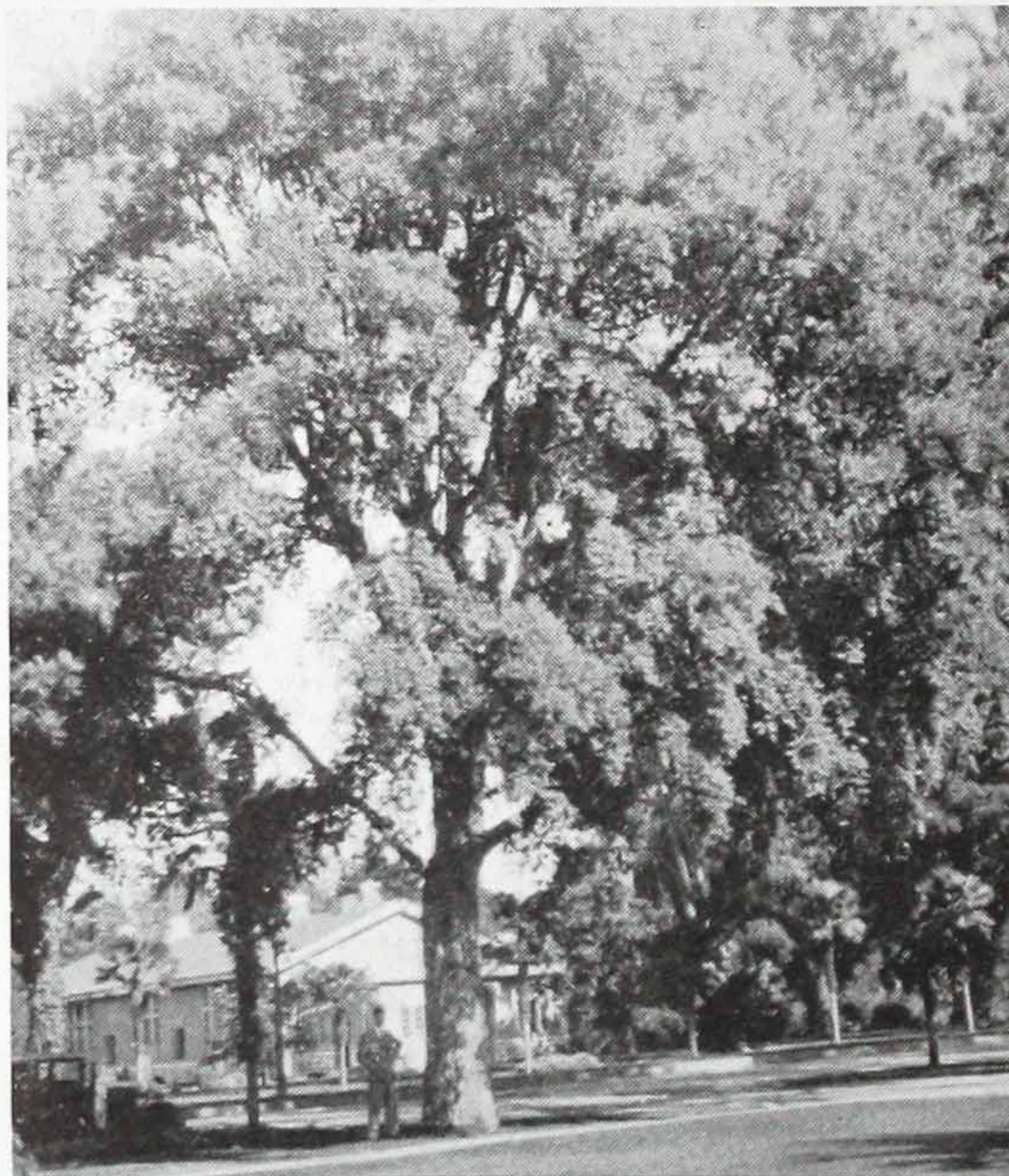


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CALIFORNIA CORK

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Research Dept.
Crown Cork & Seal Co.

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• Cork Oak, Napa State Hospital
Grounds, Napa County, California.



• C. E. McManus, President,
The Crown Cork and Seal
Company.

CORK FROM CALIFORNIA

**Western Crown Cork & Seal Corporation,
CCS subsidiary, undertakes interesting proj-
ect of planting and stripping cork trees**

WHILE on a business trip to the West Coast some time ago, Mr. Charles E. McManus, President of The Crown Cork and Seal Company, observed that some of the cork oak trees which are growing in California were large enough to have the cork bark stripped. Mr. McManus at once realized the possibilities in a domestic source of cork and made plans with the proper state and local authorities to have the cork trees of suitable age and size stripped during the summer of 1940. At the same time arrangements were made to collect the acorns and plant as many as possible. Western Crown Cork & Seal Corporation, a subsidiary of The Crown Cork and Seal Company, were assigned this interesting project and they are in charge of all phases of stripping and planting work.

California cork acorns ripen and fall from the trees in November and during the winter of 1939 many plantings were made. The stripping of corkwood is carried out when the sap is flowing freely and during last July, August and September quite a substantial quantity of corkwood was stripped from the California cork oak trees. And in 1940 the planting of cork acorns was widely extended, as many as five thousand acorns having been planted.

The United States Government became interested in home grown cork many years ago. About 1858 cork acorns were obtained from Spain and distributed in the United States for planting by the Patent Department. From this effort some cork trees were started in the Southeastern States and California. Most of these died from lack of proper care, storms, or other reasons. In 1880 more acorns were obtained and distributed to many places in the Southern States, Arizona and California. While some trees from this planting are still alive many

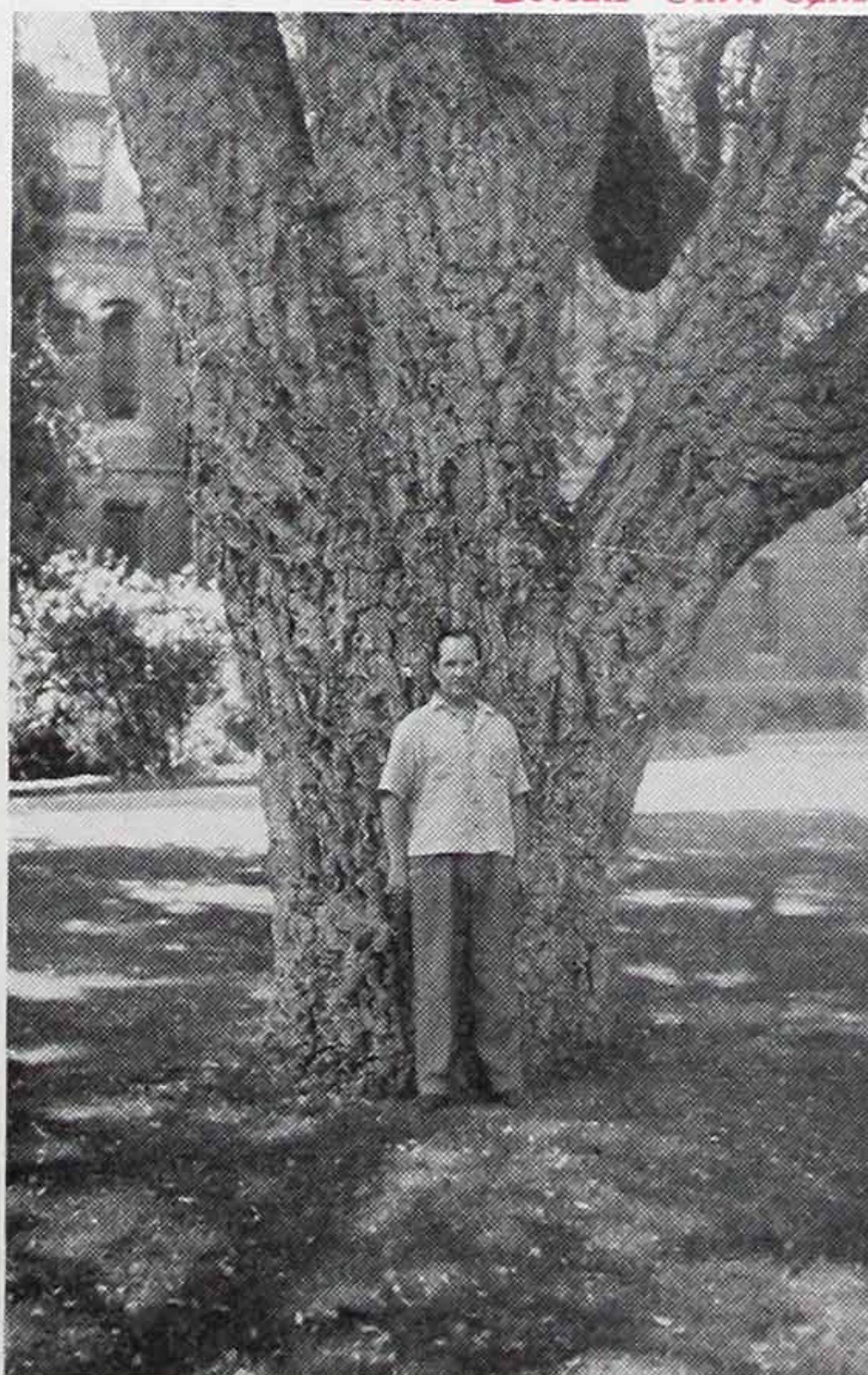
of them were lost. In 1904 an extensive planting of cork acorns was made at Chico, California, and today a large number of trees are living from this effort. This constitutes the largest single area of cork trees in the United States.

Accordingly, the California cork trees which were recently stripped, are of three ages. A few very old trees are from the 1858 planting, some from the 1880 acorns, and the balance from the planting in 1904. A few trees of unknown age have been found which have grown from acorns planted by interested residents or are the result of natural propagation. It is interest-

ing to note that on a piece of virgin cork from a tree in the Chico grove thirty-five annual rings could be counted.

For over 2300 years the world's supply of cork has come from the landed area which forms the shores of the Western Mediterranean. Now, it is possible, and appears highly probable, that before many more years the United States may produce its own cork requirements. Two of the principal factors which limit the extent of the cork growing regions are climate and soil. However, the climate and soil conditions in many parts of California closely resemble those of Spain and Portugal. Mild

Photo--Metcalf--Univ. Calif.



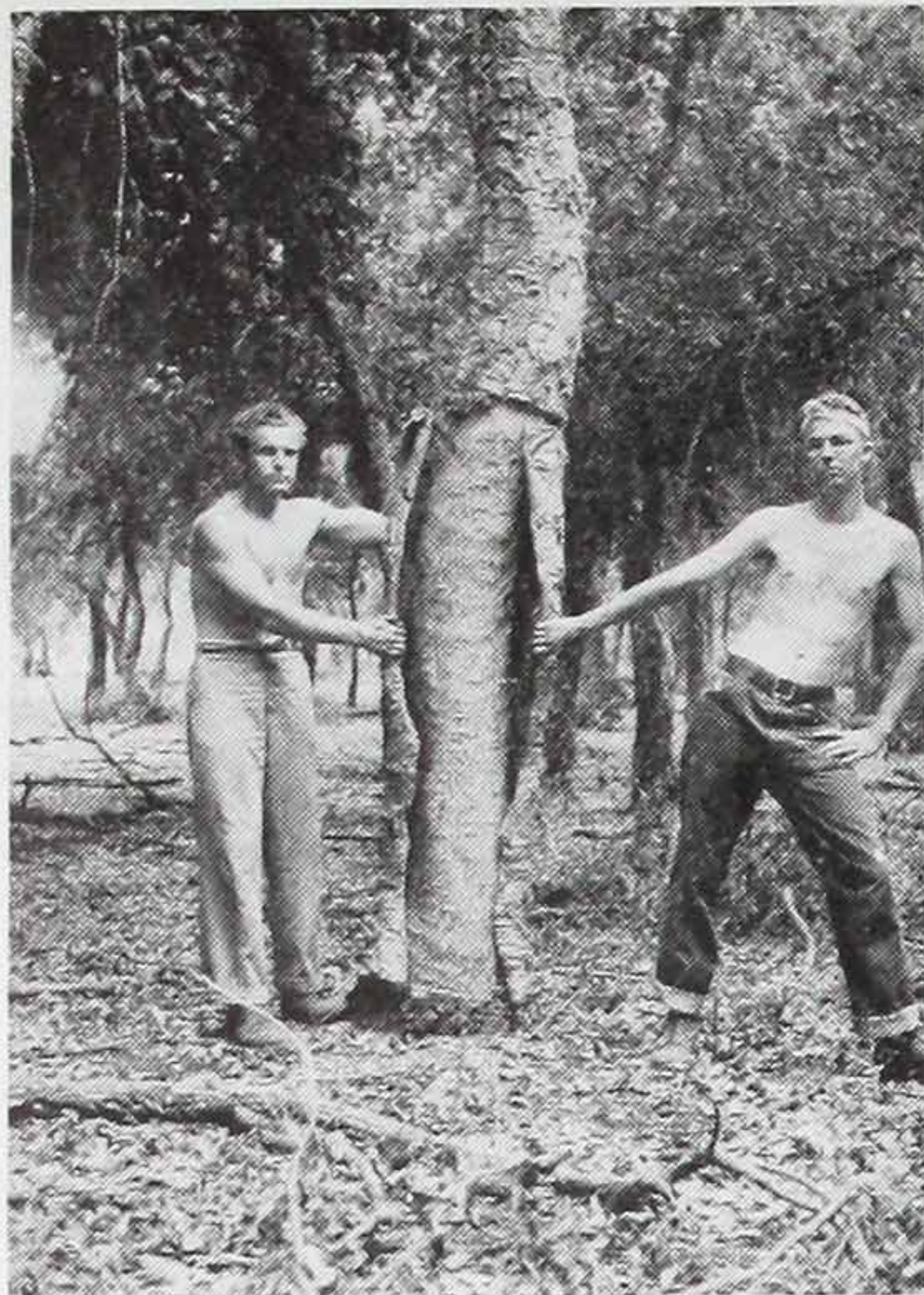
• Closeup of large cork oak at
Napa State Hospital.

Photo--Metcalf--Univ. Calif.



• Tree at McGill Ranch showing
tools used in stripping.

Photo--Metcalf--Univ. Calif.



• Cork bark is removed from some trees much easier than from others.

Photo--Metcalf--Univ. Calif.



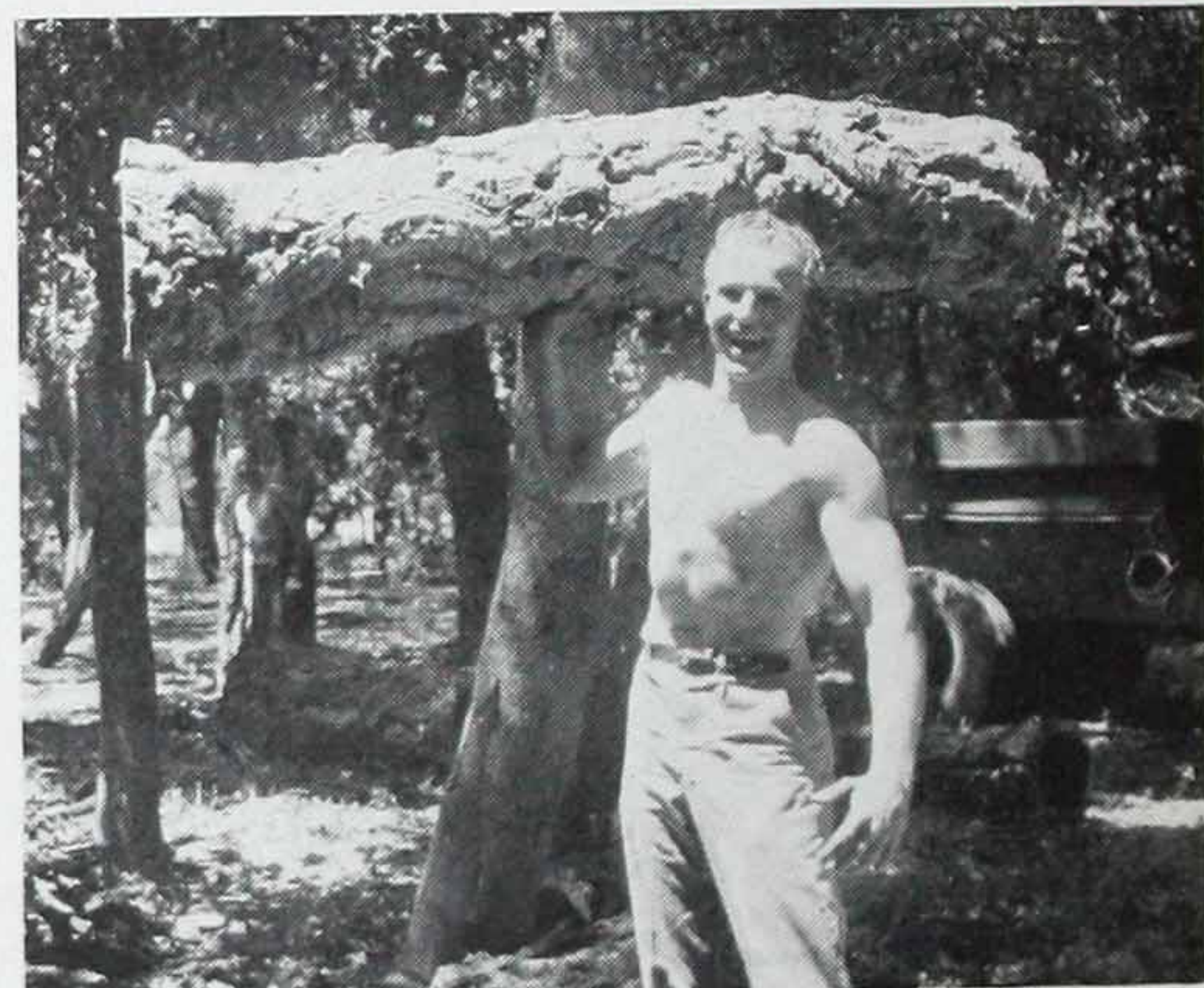
• Stripped trees grow new bark which may be removed again at periods of 8 to 10 years.

winters, with rolling terrain over which moist sea breezes blow, provide good growing conditions for the cork oak tree.

A large quantity of corkwood, harvested in California during the past summer, has recently been received at the Research Laboratories of the Crown Cork and Seal Company in Baltimore, Maryland, for study and evaluation. Careful examination and preliminary tests indicate that the domestic cork is equal in every way to the imported article of the same grade. Indeed it is Mr. McManus' opinion that the cork may even be superior. It is too early to predict the future of the endeavor, but the next twenty years will witness much progress in growing cork in the United States.

Meanwhile, Mr. McManus is enthusiastically supporting this enterprise and the stripping of additional trees and further acorn plantings are planned for 1941.

Photo--Metcalf--Univ. Calif.



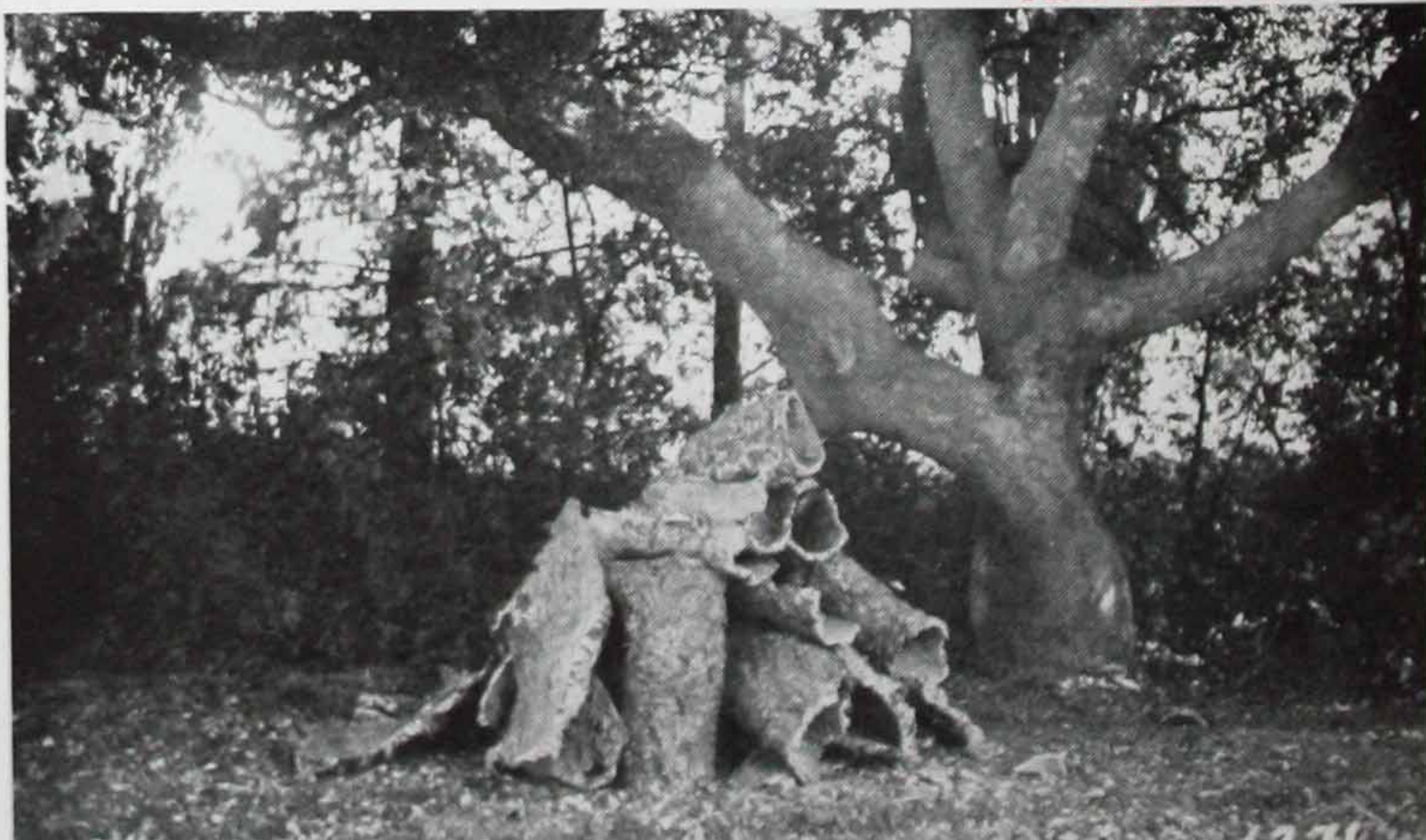
• Log of cork stripped by only one vertical cut.

Photo--Metcalf--Univ. Calif.



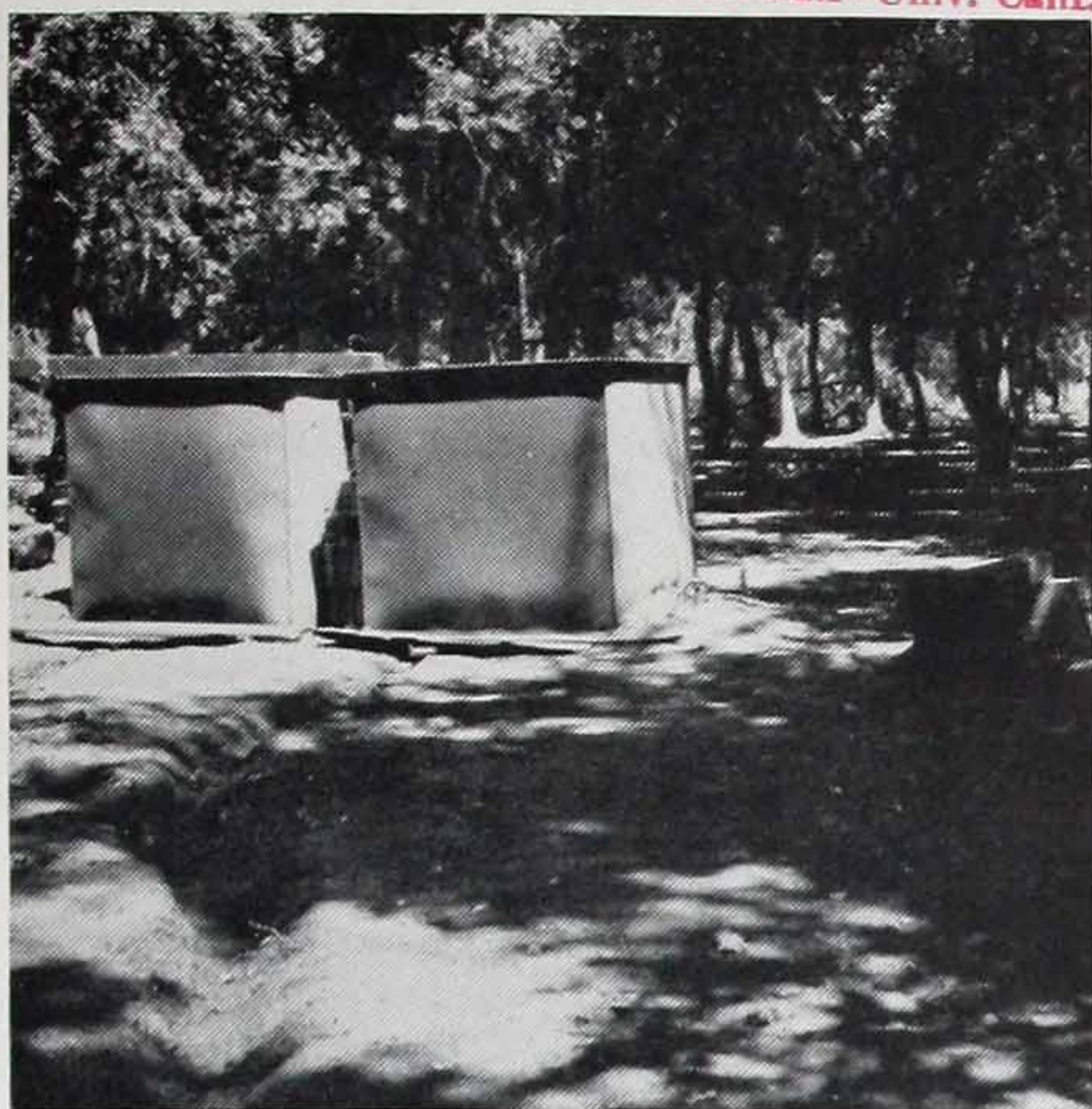
• Weighing stripped corkwood from a tree on McGill Ranch.

Photo--Metcalf--Univ. Calif.



• This tree yielded 151½ lbs. of stripped corkwood.

Photo--Metcalf--Univ. Calif.



• Tanks used for boiling cork bark at Chico.

Photo--Metcalf--Univ. Calif.



• Baled corkwood from Chico Forestry Station. Removed in 1940 from trees planted in 1904.



• California cork arriving in Baltimore.

Photo--Metcalf--Univ. Calif.



• Cork oak grove on Napa Game Farm. Trees are about 60 years old.



Program of Mr. Charles E. McManus to develop domestic source of cork in California is well ahead of schedule. Photo shows first step of stripping bark.

More About California Cork

The program of Mr. Charles E. McManus, President of The Crown Cork and Seal Company, to develop a domestic source of cork in California has made outstanding progress during the past year. In fact, this enterprise is considerably ahead of schedule and is being received with widespread enthusiasm by the people of the state. Based on the results of 1941 and the cork planting agenda for the next few years a limited supply of domestic cork is assured after a reasonable period of time for growth elapses. Complete and thorough tests conducted on the cork stripped from some of the older trees and observations made on the progress of young seedlings recently set out in different locations prove definitely that cork of excellent quality can be produced in California.

ONE of the most stimulating results obtained during the entire year was the proof of the high quality of the cork which was

Photos: Wide World



Tests of cork stripped from California oaks in summer of 1940 proved quality equal to imported cork. Second step in stripping the bark is illustrated.



Plantings scheduled for next few years, on basis of 1941 results, assure a limited supply of domestic cork after a reasonable period of time for growth elapses. Bark has been completely removed with tools shown.

stripped from the California cork oaks in the summer of 1940. Thorough examination and complete tests show the domestic cork is the equal of, and may be used interchangeably with, imported cork. The amounts of clean, usable cork obtained by grinding large quantities of the California cork bark were very good. One two thousand pound lot upon grinding yielded over sixty percent of usable cork, the loss being principally hardback and moisture. Compositions prepared from this granulated cork were the equal of similar compositions made with cork imported from the Mediterranean area.

The past summer additional stripping of California corkwood was carried out. This time the central and southern parts of the state were selected and cork was removed from trees in Calaveras and Los Angeles counties. One large tree at Camp Seco, Calaveras County, which had been systematically stripped in 1911, yielded 330 pounds of cork bark from the trunk alone. A considerable quantity of thick cork was left on the large, lower limbs. At Chatsworth, Los Angeles County, the average yield of corkwood from twenty-six year old trees, which were stripped only about the trunk to a height of approximately eight feet, averaged fifty pounds per tree. Almost two tons of corkwood removed from the trees in these California areas have been received in Baltimore for laboratory testing. The general appearance of this cork is good and it is evidently of the same high quality as the cork obtained from the Sacramento Valley region last

year. It is now being processed into different articles of composition cork and given complete laboratory testing.

The planting of young cork trees has been proceeding satisfactorily. During the past year more than 21,000 cork seedlings have been set out. Most of these were distributed in California, but a few were planted in Arizona.

The following list, prepared by the Western Crown Cork & Seal Corporation, who is in charge of this project, shows the localities where approximately 15,000 of the seedlings were set out. Other plantings were made at Bangor in Butte County and Garden Springs, California, as well as in Phoenix, Arizona. A large planting also has been made in Napa County on some

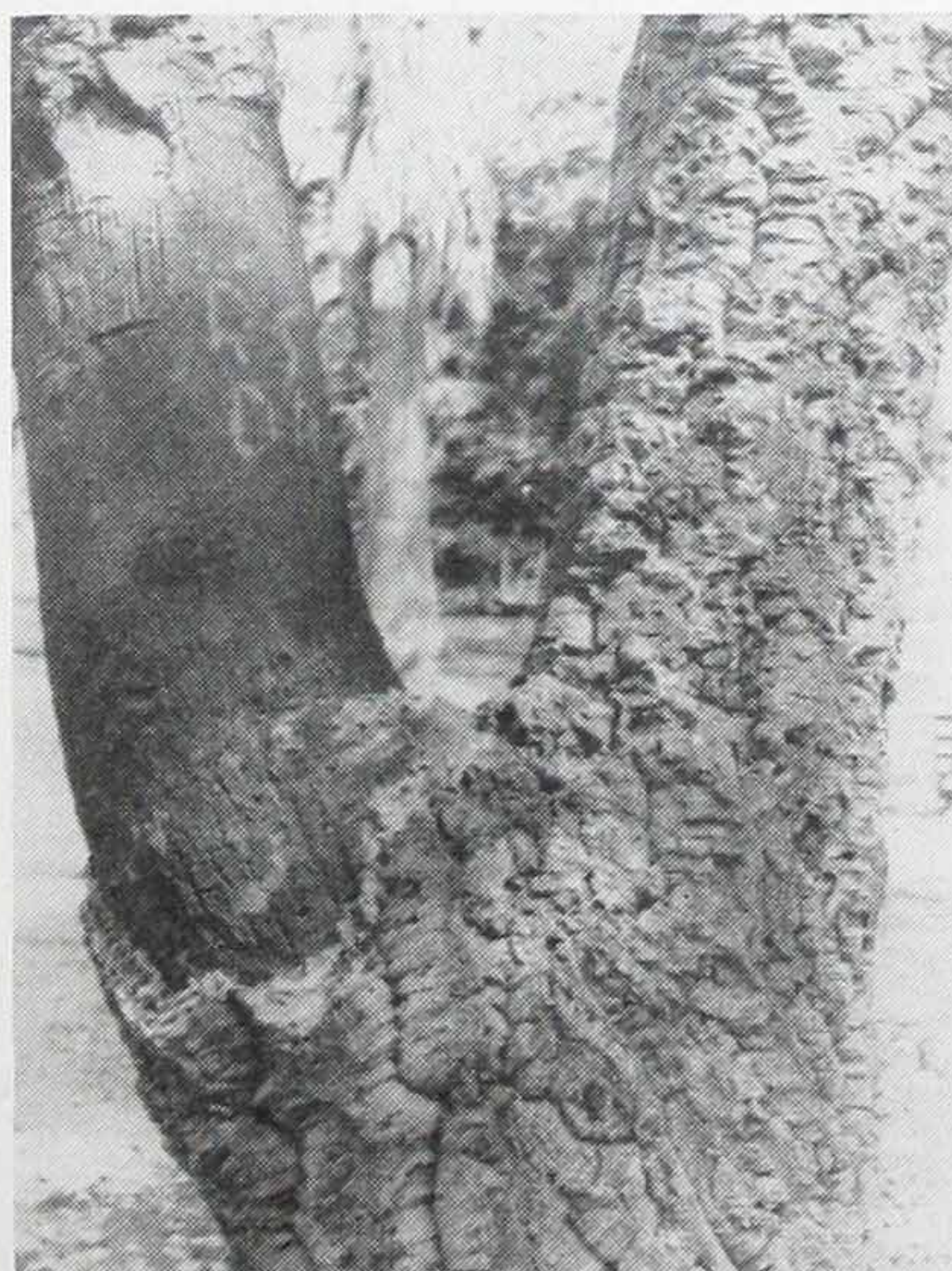
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High average yield was obtained from additional strippings of California corkwood made last summer in the central and southern parts of the state.



G. D. Greenan, of Western Crown Cork & Seal Corporation, is supervising the domestic cork growing project in California.



Many full-grown cork trees are scattered throughout California. This V-shaped cork oak is at Roeding Park, Fresno.



Display of California grown cork—bark, granulated, and composition—in lobby of Western Crown Cork & Seal Corporation, San Francisco.



• Cork oak tree in Agnew, California, age 50 years.

property owned by J. M. Rogers, Coca-Cola bottler of Vallejo, California.

SOUTHERN CALIFORNIA COUNTIES

	Applications	Trees
Imperial	5	360
San Diego	15	1350-1950
Riverside	8	485
San Bernardino	5	300
Los Angeles	13	1880
Orange	2	550
Santa Barbara	3	150
	—	—
	51	5675

SOUTH COAST COUNTIES

	Applications	Trees
San Luis Obispo	1	50
Monterey	4	262
Santa Cruz	13	1000
San Benito	1	50
Santa Clara	6	700
San Mateo	1	150
	—	—
	26	2212

SAN JOAQUIN VALLEY COUNTIES

	Applications	Trees
Fresno	1	50
Kern	4	300
Madera	1	50
Merced	1	50
San Joaquin	4	200
Stanislaus	2	100
Tulare	6	550
	—	—
	24	1500

SACRAMENTO VALLEY COUNTIES

	Applications	Trees
Butte	2	250
Eldorado	2	250
Glenn	2	110
Placer	4	250
Sacramento	2	325
Tehama	2	150
Yolo	2	100
Yuba	1	50
Plumas	1	250
Siskiyou	3	200
	—	—
	21	1935

BAY REGION AND NORTH COAST COUNTIES

	Applications	Trees
Alameda	4	350
Contra Costa	20	2050
Marin	1	100
Napa	2	200
Solano	5	400
Sonoma	6	400
Lake	1	100
Mendocino	1	400
Humboldt	1	50
	—	—
	41	3000

SUMMARY

	Applications	Trees
Southern California	51	5675
South Coast	26	2212
San Joaquin Valley	24	1500
Sacramento Valley	21	1935
Bay Reg. & N. C.	41	3000
	—	—
TOTALS	163	14,322

The seedlings were planted on various types of soils and their growth under different soil conditions will be closely watched during the next few years.

During 1942 Western Crown Cork & Seal Corporation intends to expand this project as much as possible.

From 75,000 to 100,000 cork acorns will be planted in nurseries and before the end of the year more than 50,000 seedlings will be set out. Plans for this year include, also, the stripping of additional cork trees in selected areas.